

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re patent application of:

Paul A. Manfredi Atty. Docket No.: BUR920030054US1

Filed: May 14, 2007 Examiner: Watson, Joy L.

For: PERMEABLE MEMBRANE CLEAN STATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' REPLY BRIEF

Sirs:

An Appeal Brief, appealing the final rejection of claims 8, 11-14, 21, and 26, all the claims currently pending in the present application, was timely filed on December 5, 2008. The Examiner's Answer was mailed on March 2, 2009. The Examiner's First Supplemental Answer was mailed on March 31, 2009 and specifically replaced the Examiner's Answer. The Examiner's Second Supplemental Answer was mailed on April 13, 2009 and specifically replaced the Examiner's First Supplemental Answer. Thus, this Reply Brief is in response to the Examiner's Second Supplemental Answer and, pursuant to 37 C.F.R. §41.41 that establishes a two-month period for response, this Reply Brief is timely filed.

Reply Brief

I. Appellant's Reply To "Response to Argument" Section On Pages 9-10 Of Examiner's Answer

A. Regarding the 35 U.S. C. §112, first paragraph, rejections of claims 21 and 26.

[0001] Examiner provides as follows: "Applicant is arguing that the claimed subject matter in claims 21 and 26 is supported by the specification in paragraph 17 thus does not constitute new matter. This paragraph discloses the different embodiments separately as an individual embodiment of the invention. Paragraph 17 does not disclose that the two individual embodiments are combined to create a third embodiment, thus claims 21 and 26 contains new matter."

[0002] The Applicants respectfully disagree with the Examiner's conclusion. MPEP§2163 provides that "To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention" citing, for example, *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1563, 19 USPQ2d at 1116. It further provides that "newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure".

[0003] The final rejection indicates that "The application does not support that the disposable liner is both perforated and finned based on applicant's specification and figures." The Appellants submit that paragraph [0017] of the specification implicitly discloses that the claimed disposable liner could be both perforated and finned. That is,

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one skilled in the art could reasonably conclude from reading paragraph [0017] that the Appellants had possession of the claim invention.

[0004] Paragraph [0017] of the specification provides that “The semi-permeable material 20, 30 can be a permanent part of the shield 12 or a disposable material designed to be periodically removed from the shield and replaced.” That is, it provides that the semi-permeable material can comprise a disposable liner. Paragraph [0017] further provides that the “The semi-permeable material 12 comprises an absorptive material, a screen material, a perforated material, a finned material, etc.” Thus, paragraph [0017] clearly discloses that the semi-permeable material could comprise a disposable liner and that it could comprise “an absorptive material, a screen material, a perforated material, a finned material, etc.”

[0005] Additionally, the Appellants submit that the use of “etc.” clearly indicates that the list is not all encompassing and may include other unspecified things in the same class (e.g., see definition of etcetera in *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2006 by Houghton Mifflin Company. Published by Houghton Mifflin Company. All rights reserved.*). Furthermore, the Appellants submit that because the semi-permeable material is disclosed as comprising “an absorptive material, a screen material, a perforated material, a finned material, etc.” and because this list of semi-permeable materials is not limited by a conjunction, such as “or” or “and”, one skilled in the art would recognize that the embodiments of the invention are not limited to comprising only one such material or all such materials. In fact one exemplary combination of less than all of the materials contained in the list is

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explicitly disclosed: “The fins...can be absorptive”). Thus, the Appellants submit that the use of “etc.” rather than a conjunction, such as “and” or “or”, implies that any one of the materials alone and/or in combination could be employed. Consequently, the Appellants had possession of the claimed structure including a disposable liner that is both perforated and finned.

[0006] In view of the foregoing, the Board is respectfully requested to reconsider and withdraw these rejections.

B. Regarding the 35 U.S.C. §103(a) rejections of claims 8, 11-14, 21, and 26 based on Yang et al. and Mahvan.

[0007] The Examiner provides as follows: “The applicant is arguing that the prior art does not teach fins on the shield member and that the corrugations taught by the prior art does not constitutes fins. Applicant points out on page 15 of the appeal brief in the last paragraph, that the fin is a vane and that the vane has sometimes curved surfaces radially mounted along an axis. Figure 3 of the prior art (5,868,843) shows the corrugations, which are curved surface radially mounted along an AXIS thus the corrugations are fins.” The Appellant’s respectfully disagree for the following reasons.

[0008] The surface of the structure in Figure 3 of Yang is illustrated and described in the specification as being “corrugated”. The cited portion of the Appeal Brief refers to the fact that a claimed feature of the invention is “fins” and not a corrugated surface (as in Yang). In the Appeal Brief the Appellant’s argued that the dictionary definition of a fin is “something resembling a fin in shape or function” and one example of something resembling a fin in shape or function provided by the dictionary

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definition is “A projecting vane used for cooling...”. The dictionary definition of vane, includes, “Any of several usually relatively thin, rigid, flat, or sometimes curved surfaces radially mounted along an axis, as a blade in a turbine or a sail on a windmill, that is turned by or used to turn a fluid.”

[0009] Referring to Figure 3, col. 2, lines 63-65 of Yang provides as follows” “A corrugated piece of sponge 31 is substantially equal in length to the mounting piece 32 so as to cover the whole inner side of the same.” That is, Yang discloses that the whole inner side of the mounting piece is covered with *a single piece of sponge* having a corrugated surface (i.e., a curved surface). Thus, Yang does not discloses “curved surfaces” radially mounted, but rather a single mounted sponge having a curved surface. Furthermore, the Applicants submit that the corrugations on the surface of the sponge 31 shown in Figure 3 of Yang clearly do not resemble fins in shape or function (i.e., they clearly do not resemble in shape or function an “appendage extending from the body of a fish or other aquatic animal, used for propelling, steering, or balancing the body in the water”, see The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2006 by Houghton Mifflin Company. Published by Houghton Mifflin Company.).

[0010] The Examiner further provides as follows: “Applicant is further arguing that the Mahvan reference is non-analogous art since it is for a sputtering process. Mahvan is substrate processing apparatus, with a shield that surrounds the processing area to prevent the escape of processing fluids from the processing area. This reference was used to show that it is within the skill level of one of ordinary skill in the art that a

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shield for a processing area can surround the entire processing area. Thus it is obvious to one of ordinary skill in the art at the time the invention was made to have the shield of the primary reference surround the entire processing area, since Mahvan teaches that a shield can surround the entire processing area.” The Appellant’s respectfully disagree for the following reasons.

[0011] The Appellant’s argument with respect to Mahvan was made in response to statement in the final rejection at paragraph 3.d. citing Mahvan as “teaching shields (Fig. 1 item 26, 28 and 30) that surrounds the substrate in order to capture sputtered materials (reads on mist) and prevent it from being deposited on the substrate (col. 2, lines 60-65)”. The Appellant’s did not argue in the Appeal Brief that Mahvan was non-analogous art, but rather argued that nothing in the cited portion of Mahvan or anywhere else in Mahvan “reads on mist”, as asserted by the Examiner.

[0012] Specifically, Mahvan teaches a shield for use in a sputtering system that deposits ejected atoms of a material, such as carbon, onto a fixed substrate. During a wide-angle sputtering deposition process (e.g., a carbon deposition process), oversprayed atoms (i.e., atoms that miss the target) are deposited onto the shield (see col. 1, lines 30-38). In other words the shield of Mahvan does not capture spray that splashes off a rotating target, as in Yang or in the present invention, rather it simply captures deposited material that misses the target. Furthermore, the shield structure of Mahvan is specifically designed with cavities (illustrated as indentations) to hold the deposited material in a way that minimizes flaking due to shield buckling. The cited portion of Mahvan (i.e., col. 2, lines 60-65) refers to the sputtering gun used for the deposition

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process and the shield members. Those skilled in the art will recognize that “sputtering” is a process by which atoms are thinly deposited on a surface. Nothing in the cited portion of Mahvan or anywhere else in Mahvan “reads on mist”, much less discloses a shield surface structure (e.g., like the fins of the present invention) that would provide for both fluid and air flow control that would prevent cleaning fluid and foreign matter particles from forming into a mist and being re-deposited back on the semiconductor wafer.

[0013] In view of the foregoing the Board is respectfully requested to reconsider and withdraw these rejections.

C. Regarding the 35 U.S.C. 103(a) rejection of claims 21 based on Yang, Mahvan and Dictionary.com.

[0014] The Examiner provides as follows: “Applicant also argues that the art does not teach that the shield has perforated surface. Yang teaches that the fin shield is made up of a sponge material. A sponge is open cellular material, thus allowing it to absorb fluids and impacts. Since the sponge is open cellular, hence porous, therefore the shield is inherently perforated from the sponge material used for the shield.” The Appellants respectfully disagree for the following reasons.

[0015] Claim 21 refers to “a perforated material having perforations facing said substrate...”. The Appellants submit that nothing in the specification of Yang explicitly, implicitly or inherently teaches or suggests such a “perforated material” with “perforations facing said substrate”. As shown in the dictionary.com reference cited by the Examiner, the term “perforated” is generally understood to mean “to pierce, punch, or

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bore a hole or holes in”, “to pass into or through something”, “having a hole cut through”, etc.

[0016] Yang at col. 2, lines 54-65, describes a detachable sponge device 27 mounted on the inner wall 25 of a curved mounting piece 32. In the context of the invention of Yang, sponges are “The light, fibrous, flexible, absorbent skeleton of certain of these organisms, used for bathing, cleaning, and other purposes” or “Porous plastics, rubber, cellulose, or other material, similar in absorbency to this skeleton and used for the same purposes” (see The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2006 by Houghton Mifflin Company. Published by Houghton Mifflin Company). However, the Appellants submit that the fact that a sponge material may be inherently “porous” (i.e., full of pores, where a pore is “A minute opening in tissue, as in the skin of an animal, serving as an outlet for perspiration, or in a plant leaf or stem, serving as a means of absorption and transpiration”, see The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2006 by Houghton Mifflin Company. Published by Houghton Mifflin Company) does not mean that it is inherently perforated (i.e., having holes pierced, punched or bored into or through it) or, even more particularly, that perforations in the material face the substrate.

[0017] In view of the foregoing the Board is respectfully requested to reconsider and withdraw these rejections.

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II. Conclusion

In view the forgoing, the Board is respectfully requested to reconsider and withdraw the rejections of claims 8, 11-14, 21, and 26. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0456.

Respectfully submitted,

Date: April 22, 2009

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